S/N unknown PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	KANG et al.	Serial No.:	unknown
Filed:	concurrent herewith	Docket No.:	8255.51US01
Title:	MOTION ESTIMATION METHOD AND DEVICE		

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By: _____
Name: Brian Maharaj

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D. C. 20231

Dear Sir:

In connection with the above-identified application filed herewith, please enter the following preliminary amendment:

IN THE SPECIFICATION

Please amend the listed paragraphs as follows:

Page 1, Paragraph 2, lines 15-22:

Generally, video signal compression coding and decoding can desirably reduce the capacity of memory necessary for storing image information as well as transmit the image information over a low-rate channel. In this regard, such compression coding and decoding techniques occupy a very important part of the multimedia industry requiring a variety of image applications such as image storage, image transmission, etc.

Page 1, Paragraph 3, lines 23-25:

Fig. 1 is a schematic block diagram showing the construction of a conventional video coding system. For efficient video compression coding, there is generally used a

Page 3, Paragraph 2, lines 4-21:

In a general video coding method and system, motion prediction and compensation operations are not performed on a frame basis, but in the unit of a predetermined number of picture elements or pixels (M pixels in the horizontal direction and N pixels in the vertical direction, typically indicated by MxN pixels). This group of pixels is typically called a macroblock. It is generally prescribed that the macroblock is sized with 16 pixels in the horizontal direction and 16 pixels in the vertical direction (referred to hereinafter as "16x16"). In the present invention, although the size of the macroblock is not limited to a specific value, it will be described as 16x16 as an example for the convenience of description. A motion vector is two-dimensional information indicative of the quantity of motion of an object in the reference and current frames on two-dimensional X-Y coordinates. Namely, the motion vector consists of a transversal motion value and a longitudinal motion value.

Page 7, Paragraph 1, lines 1-12:

manner has a value selected to minimize the motion compensated error, not considering the coding efficiency of the motion vector. For this reason, a bit stream of a coded motion vector may exhibit a considerable difference in size even when a motion compensated error has a slight difference. There is a conventional method for conducting no coding when motion compensated errors resulting from a motion vector estimated in a motion search method and a zero vector are below predetermined threshold values. However, this method is only effective for frames with little variations. In other words, it cannot effectively perform a motion estimation operation for frames with variations.

Page 10, paragraph 7, lines 24-25:

Abbreviations used in the specification are defined as follows before describing the present invention in detail.

IN THE ABSTRACT

Please amend the abstract as follows:

A motion estimation method and device for selecting a final motion vector to be coded, in consideration of a zero vector and a predicted motion vector as well as a motion vector having a minimum error, thereby increasing video coding efficiency.

REMARKS

The above preliminary amendment is made to correct grammatical and typographical errors in the specification and drawings. Approval for the drawing corrections is respectfully requested.

Applicants respectfully request that the preliminary amendment described herein be entered into the record prior to examination and consideration of the above-identified application.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Curtis B. Hamre (Reg. No. 29,165), at 612.336.4722.

Respectfully submitted,

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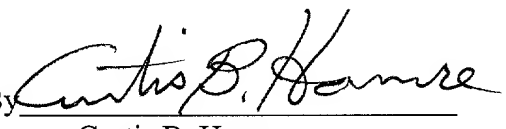
Dated: February 13, 2001

By 
Curtis B. Hamre
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CBH/kas